11-2006

Survey Results From *Improving the State Superfund Process* (2006)

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6: Survey Results

The EQC Agency Oversight Subcommittee was approached by Professor Robin Saha of the University of Montana to conduct a detailed survey of stakeholders from each of the sites evaluated in Chapter 4. Set out below is a summary of the University of Montana's survey results in a memo submitted to the EQC by Professor Saha. Please note that in the public comments in Appendix E, the DEQ has made a number of comments regarding the University of Montana's survey results.

May 24, 2006

MEMORANDUM

To: Montana Environmental Quality Council (EQC) Agency Oversight Subcommittee

From: Dr. Robin Saha, Assistant Professor, University of Montana

Subject: H.J.R. 34 Study – Preliminary Report on Student Research

This memo notifies the EQC Agency Oversight Subcommittee that my graduate students have conducted the research requested to support your investigation regarding House Joint Resolution 34 on challenges that occur at Superfund sites under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the state Comprehensive Environmental Cleanup and Responsibility Act (CECRA), and the Voluntary Cleanup and Redevelopment Act (VCRA). Students have completed research for the six sites: Bozeman Solvent; Brewery Flats (Lewistown); Burlington Northern (Livingston); Lockwood Solvent; S&W Sawmill (Darby); and Upper Tenmile Creek (Rimini). I summarize below the work completed and provide an initial analysis, which can be expanded where our data allows.[16] Also included for your consideration are some possible approaches to improve the state Superfund process.

Objectives The students' efforts focused on four primary objectives: (1) to understand what is working well with the Superfund process; (2) to understand the reasons for slow progress at the sites; (3) to understand communication difficulties among the various parties; and (4) and to suggest possible solutions to the problems identified.

Methods and Analysis Students were divided into 1 or 2 person teams to conduct research on one or more of the sites. For each site, in-person or phone interviews were conducted with 6 to 10 stakeholders, which generally included agency staff (DEQ and/or EPA), local

[16] Steve Ackerlund, a technical consultant and one of the students in the class, *Community Responses to Toxic Contamination*, contributed to this summary. Some minor changes were made to this memo, which was originally submitted to the Agency Oversight Subcommittee on May 16, 2006.

officials, technical consultants, members of affected communities, and other knowledgeable persons (see attached interview protocol). Because of the limited number of students to conduct interviews, written surveys were distributed for the Burlington Northern – Livingston (BNLV) site. Interviews averaged between 1 and 1½ hours. Students took extensive notes or recorded interviews, which were subsequently analyzed to find areas of agreement as well as differences in perspectives among the stakeholders. Students also utilized the Subcommittee panel discussions, public records obtained from the DEQ, and other documents in conducting their analyses. Effort was made to identify stages of the process where stakeholders agreed the process worked well and not as well, and identify the contributing factors. The interviewees and the students also expressed ideas about how to reduce delays and communication difficulties.

Findings Each site is unique in terms of the nature of contamination, affected community, and parties involved. Thus, successes and challenges are somewhat unique to each site. Nevertheless, some factors and patterns that facilitate or impede progress at the sites were discernible. These are outlined below and summarized in the attached "Summary of Findings."

Contributors to project success included the following:

1. Interim measures, such as providing safe water supplies, were used at Bozeman Solvent (CECRA), Lockwood Solvent (CERLCA/CECRA), Brewery Flats (VCRA), and BNLV (CECRA) to quickly take care of immediate human and ecological threats once known. However, in Lockwood community members felt that these steps could have been taken sooner and serious health risks avoided if investigations had been conducted sooner.

2. Community involvement was successful at certain sites and stages of the process. Involvement of dedicated, charismatic leaders, local government, or community-based organizations, appears to have played a strong role in moving the process forward at Brewery Flats, Rimini, and BNLV. For Rimini and BNLV, EPA Technical Assistance Grants (TAG) grants facilitated community involvement and helped to counteract distrust of regulatory agencies. However, community involvement was not always sustained, and agencies too often believed it was effective when affected communities did not.

3. Consistent and competent project management was widely viewed as critical to success and regular progress at Lockwood Solvent and Brewery Flats (see contributors to delay below for sites with project management concerns).

4. Inter-party cooperation characterized by productive communication helped move the process forward at certain times (Bozeman Solvent, Rimini, and Brewery Flats). The challenge is to sustain and build on such efforts at these and other sites, many of which evidenced conflict among Potential Responsible Parties (PRPs), agencies, and community members.

The main factors found to contribute to delay or lack of progress at Superfund sites include:

1. Agency staffing in DEQ (turnover, open positions, and skill-levels) was consistently reported as a significant contributor to delay. This concern was overwhelmingly cited as a major problem for Bozeman Solvent, S&W Sawmill, and BNLV, and a minor problem for Rimini and Brewery Flats sites. "Slow document review" was identified as one manifestation, though other reasons were commonly noted for tardy document

turnaround (such as agency reluctance to exercise regulatory muscle and make decisions, and a generally over-cautious, over-detailed approach). Many interviewees attributed staff turnover and open positions to low salaries, and one implied a lack of qualified applicants. Although some felt that high workloads or bottlenecks at the sign-off level contributed to slow document review, we were not able to evaluate that assertion. Several consultants reported that DEQ project officers too often lacked technical expertise and experience needed to respond expediently. It was not possible, however, to systematically evaluate that claim either.

2. Limited funding available to DEQ to conduct on-site work was reported to impede progress, particularly if cooperation from PRPs is lacking (purported at BNLV and Lockwood), when multiple PRPs are litigating (Bozeman Solvent), or for a wide variety of situations where work on the site needs to be done but cannot due to lack of funding. This can limit regulatory options and impede agency responsiveness and timeliness in conducting work. For example, completion of a risk assessment (RA) reportedly stalled progress at Bozeman Solvent due to lack of funds. Stalled progress was also attributed to changes in federal funding commitments at the Upper Tenmile site (Rimini). Even the Brewery Flats site (managed under the VCRA program and widely viewed as a success story) experienced delay due to the annual cycle of Dept. of Natural Resources and Conservation (DNRC) Resource and Development Grants.

3. Debate over information needs and cleanup levels Debate over the type and amount of information needed to make decisions occurred frequently between DEQ and PRP consultants, and this constituted a major bottle neck in the process at Lockwood Solvent and BNLV. This difficulty is partially a function of the technical challenges of characterizing sites, determining a feasible approach to cleanup, and sometimes a desire by DEQ to have legally defensible data. Consultants tended to think data gathering should stop and work should begin when the source of contamination was known and tended to show concern for the cost of further studies. Less severe challenges of this type were noted for Bozeman Solvent, Brewery Flats, and Upper Tenmile. Debate between community members, on the one hand, and DEQ and RPRs on the other, regarding the appropriate cleanup level was a major source of frustration in Lockwood. It is common and understandable for citizens to want 100% cleanup and zero risk, which is rarely if ever technically or economically feasible. Changes in technical and environmental standards, and cleanup technologies, also reportedly contributed to the difficulty of efficiently working through complex information. These contributors to delay can be compounded significantly with staff turnover and agency funding (cash flow) problems.

4. Litigation was reported as a major and minor contributor to delay for the Bozeman Solvent and Lockwood Solvent sites, respectively. In Bozeman, which had multiple PRPs, some felt that litigation damaged trust, communication, and sharing of information, and led to the phenomenon of “dueling consultants.” Such contentiousness and duplication of effort inevitably leads to delay. Lockwood plaintiffs believed that litigation got the process moving by bringing attention to the site and providing residents with information, whereas RPs and some community members disagreed. They felt that it impeded the sharing of information and made agencies defensive.

5. Communication difficulties of a wide variety were noted, though only some seemed to contribute to delays, for example, a perception by community members of an ineffective working relationship between EPA and DEQ at Lockwood. Nevertheless, agency

communication with affected communities was a major challenge that contributed to community frustration (though DEQ earned high marks in working with communities overall). Technical consultants were not rated much better, unless they worked for the community as TAG recipients. Communication about health risks and environmental standards proved to be the most challenging at Lockwood, Bozeman, and Darby. Drinking water standards are not solely based on protection of human health, leaving agencies unable to say that water is truly safe to drink, even if it is legally acceptable! Thus, community members often expressed a desire for more understandable and useful information about (general and site-specific) health risks, technical, and regulatory matters.

Solutions For each site, interviewees and student researchers suggested a number of approaches for addressing common challenges at Superfund sites. I have also identified additional approaches for improving the Superfund process that also mostly stem from the above findings. These options vary in the degree to which they are practical and feasible, suitable for statutory change, appropriate to legislative oversight, and legally permissible currently. These are shown in the attached Summary Table and are outlined below.

1. *Establish presumptive remedies and use interim actions more often and where appropriate* (not just in instances of imminent human health or ecological risks). Learn from prior experiences at similar sites in Montana and elsewhere to identify and decide on appropriate remedies more quickly. Allow known problems to be addressed while additional investigations are ongoing.

2. *Adopt incentives for recruitment and retention of project officers*. Evaluate staffing needs at current or desired workloads at project officer and supervisory levels.

3. *Set and adhere to deadlines for agency document review.* Create mechanisms for making progress during project officer vacancies.

4. *Provide for more procedural flexibility within CECRA or encourage more effective use of alternatives to traditional processes,* such as under VCRA and the Controlled Allocation of Liability Act (CALA), and other collaborative processes such as multi-party negotiation and joint fact finding. Provide additional state funds to support such flexibility.

5. *Provide staff training or contract out services in risk communication, multi-stakeholder facilitation* when appropriate. Controversy appears to occur most frequently at sites that can affect personal property or health of community members. Anticipate rather than react to potential controversy using proactive risk communication and community involvement strategies.

6. *Develop a citizens' guide to CECRA and VCRA processes* and an electronic clearinghouse of current site information. Such actions will help citizens to more effectively engage in projects and obtain the information they desire.

7. *Initiate a TAG-like grant program* for community technical assistance and facilitation services to support outreach, communication, and enhanced community involvement.

8. *Set site-specific benchmarks* (performance measures), and evaluate or report progress toward them annually. This could overcome tunnel vision in project management, the natural tendency to lose site of the bigger picture when focused on the details.

9. *Set overall program milestones* (programmatic performance measures) for DEQ and require regular reporting that summarizes or evaluates progress toward them. If necessary provide adequate resources such that reporting requirements do not detract from project management tasks and supervision.

10. *Establish a more formal process for reclassifying sites* based on the effective use of interim measures so that sites can move out of the cumbersome CECRLA process, thereby allowing agency resources to be directed to the most important sites. Consider redefining “project complete” for sites with remedies that involve long-term treatment, maintenance or monitoring.

I look forward to the Subcommittee’s comments and questions about this preliminary report. If desired and the data permit, I can also provide more analysis or specific information tailored to any of the topics addressed above. Finally, on behalf of the students and myself, I want to express our gratitude for this learning opportunity and the chance to assist the Subcommittee with your study.

Attachments: Summary of Findings (Table); Interview Protocol; Summary Reports

Summary of UM Findings for EQC HJR 34 Study

	Description			Successes				Challenges							Solutions										
Site	Status	Responsible Parties	Affected Communities	Interim Actions	Community Involvement	Project Management	Inter-party Cooperation	Staff Turnover/Personnel	Lack of State Funding	Slow Document Review	Litigation	ROD Deviations	Ineffective Communication	Debate on RI Information	Increase Staff Funding	All Skills in "One Roof"/	Interagency and Public	Multi-stakeholder	Improved Decision-making	Deadlines for Document	State Fund for Cleanup	Formal Yearly Project	Presumptive Remedies	Project Reclassification[m]	Flexible TAG-like Program
Bozeman Solvent	Risk Assessment, Feasibility Study	✓	✓	✓	✓		✓[c]	●	●	●	●		○	○	✓	✓		✓	✓[g]	✓	✓	✓	✓	✓	
Lockwood Solvent	Remedial Design/Action	✓	✓	✓	✓[a]	✓					○		○	●				✓[b]			✓				✓
Upper Tenmile	Remedial Design/Action		✓		✓[j]		✓[d]	○	●[e]			○	●	○[h]	✓			✓	✓[f]						✓
Brewery Flats	Complete			✓[i]	✓	✓	✓	○		○				○				✓	✓	✓					✓
Burlington Northern	Remedial Design/Action	✓	✓	✓	✓[j]			●[k]						●	✓	✓		✓	✓			✓		✓[l]	✓
Darby	Baseline Risk Assessment	✓						●		●			●		✓		✓[n]			✓					

Notes:

● Major, ○ Minor

a During early years of the project leading up to the connection to the municipal water supply.

b Organized social infrastructure within the affected community specifically identified.

c Improved over time.

d Initially a community lead effort with invited, cooperative agency participation. Inter-party cooperation fluctuated over time, and is presently improving.

e Specifically, certainty in multi-year funding and transparency of funding decisions

f Improved multi-stakeholder involvement in decision-making and documentation of decision-making.

g Characterized as slow, DEQ hesitant to use authority.

h Specifically regarding issues of developing a water and sewer district: management development, operation and maintenance cost estimates and permitting needs.

i Conducted voluntary cleanups under the VRP prior to receiving approval from DEQ.

j Included the use of a Technical Assistance Grant (TAG) contractor.

k First six years had the same project manager, and the project progressed well.

l Specifically, the ability to obtain a technical impractability waiver for ground water cleanup as is allowed by EPA.

m Includes the idea of developing a new type of "project complete' that considers human health exposure eliminated, but long-term monitoring and other work may be ongoing.

n DEQ should be required to communicate health issues to the county, such as contaminated wells and possible other issues. An electronic "clearinghouse" was suggested. Posting signs to inform residents of hazards was also suggested.

o Needed a better approach for addressing community health concerns.

p Contamination discovered in 1986 and bottled water was provided, but connection to the public water system did not occur until 2000.

q Settlement achieved with most parties.

r Lack of funding prevented timely RI completion.

s In response to the finding of ineffectual communication and the desire to streamline PRP contention.

t Big Spring Creek watershed partnership.

u Public education on process and technical aspects of the project desired.

University of Montana Questions for
EQC Agency Oversight Subcommittee HJR 34 Study[17]
April 4, 2006

Interview Introduction: *Thank you for meeting with us today. My name is _____ and this is _____. We are graduate students at the University of Montana (Environmental Studies Program). We are assisting the Montana Environmental Quality Council's Agency Oversight Subcommittee in a study of what is working well and what can be improved with the (CECRA and CERCLA) Superfund process in Montana. The EQC is a part of the Montana Legislature. The EQC conducts studies such as this one, publishes reports on environmental policy topics, and proposes policy changes to the full Legislature.*

Our objective is to understand obstacles to successful cleanup of contaminated sites. We also seek to identify ways that the Superfund process can be improved, for example, how unreasonable delays in getting to and completing the cleanup phase can be prevented. Many of the questions we will be asking were provided by the EQC. We are interviewing approximately 10 persons who have been involved with the _____ site. We have already spoken with _____. The _____ site is one of six sites selected by the Subcommittee for study.

Your frank opinions and perceptions are highly valued in helping us understand what is working well and what can be improved with the Superfund process. Your responses will be available to the EQC unless you wish them to be treated confidentially, which means that unless we can remove information that could identify you as the source, your specific comments will not be shared beyond other students in the class and our professor (Robin Saha). If at any time during this interview you wish to make your answer to a particular question confidential, please let me know.

A final report summarizing our interviews for all six sites will be publicly available. Your participation is entirely voluntary and if there are questions you do not want to answer, just say so and we will move on. If you wish to stop the interview at any time, you may do so. Do you understand?

We would like to record your comments so that we can be sure that we accurately convey your views. Do we have your permission to do so [pause]? Thanks (or ok that is fine, we will just take notes). Do you have any questions for us at this point?

1. Please describe your involvement in the _____ ___project.
   When did you become involved and why?
   Please describe your involvement since that time.

[17] The prompts (secondary questions provided along with the interview numbered questions) were used at the judgment of the interviewer to encourage conversation. Questions were worded to minimize biasing of responses, perceptions, and judgments about factors contributing to or impeding the project's success. The following social science research guide was used: Gorden, Raymond L. 1998. *Basic Interviewing Skills, 2nd Ed.* Long Grove, IL: Waveland Press.

Please tell us a little more about your organization/group.

2. What parts of the project do you think have been successful and why?
   Please tell me more about what you mean by success.

3. What parts do you think were less successful or unsuccessful and why?
   Do you think there were any significant delays with the project? If so, please explain.
   There will be an opportunity later in the interview to discuss the reasons for slow progress, whether they were unavoidable, and steps that could be taken to speed up the process in the future.

4. Please describe your understanding of the role that communication has had in this project?
   [Communication = exchange of information between parties]
   How effective has communication been [choose a few as appropriate]:
   - between DEQ and EPA
   - between agencies and community
   - between agencies and PRPs
   - between PRP's and community
   - within the community
   - NOTE: consultants are covered in question 13

   Can you give me some examples?
   Was it always that way?
   When did communication become ineffective?
   When did communication begin to improve?
   Who communicated well and who didn't? Why?

7. Please describe how the public/community has participated in the Superfund process at _____ site.
   When and why did the community get involved/participate in the process?

8. How well has public participation worked?
   Please explain what has worked well or not worked well..
   Would you approach public participation differently in the future?
   If so, how?
   Why would you take this approach?

9. Please explain your understanding of the role of leadership in this project?
   Can you offer examples of effective leadership at the site?
   Prompt: Who have been effective leaders and why?
   Can you offer examples of ineffective leadership at the site?
   Prompt: Who have been ineffective leaders and why?

10. How important has funding been to this project?
    How has funding affected the project?
    How has funding helped or impeded cleanup progress?
    Please explain.

Can you talk a little more about …

11. What is your understanding of the role of DEQ/EPA personnel for this project/site?
    Has staff turnover affected the project and if so, how?

12. Were there any phases of the project that you think took too long to complete (for example, the remedial investigation, feasibility study/workplan, or actual construction/cleanup)? Please explain why you think so.
        Was there a need to answer every technical question with a great deal of certainty?
        Were these questions answered adequately?
        Did the technical studies hinder actual cleanup at the site?

13. Do you think that it is best to initiate certain cleanup actions (conduct interim remediation) at the site before the extent of contamination is fully known (before the remedial investigation process is complete)? Why or why not?

14. What do you think about the abilities of the lead agency staff's and consultants' overall ability [to oversee the project]?
    What about their project management skills - have they been adequate? Why or why not?
    What about their technical skills - have they been adequate? Why or why not?.
    What about their communication skills - have they been adequate? Please explain.
    Does the staff have adequate background (education and experience)? Why or why not?

15. **Question to Members of the Affected Community.** How have the agency and consultants of the PRPs communicated technical aspects of the project to [you/the community]?
    Please provide examples of effective or ineffective communication about technical matters, and comment on what worked well or didn't.
    How could such communication be improved?

16. What is your understanding of the cleanup standard, i.e., the level of cleanup, for this site?
    Were you satisfied with the cleanup standard? Why or why not?
    Were you satisfied with the process for determining the cleanup standard? Why or why not? [Keep in mind at the current point in the process, the cleanup standard may be proposed rather than final, or it may not even been proposed yet.]

17. If there has been litigation or administrative appeals relating to this site, how have they affected the process?

18. For this next question, please refer to specific stakeholders or stakeholder groups. If you were the chief advisor for the various stakeholders, what would you recommend they have done differently?

19. What about the current regulatory process (CERCLA/CECRA) do you think works well?
    What about the current regulatory process do you think doesn't work well?
    What regulatory changes would you suggest?
    What resources would be helpful for communities?

20. What other comments do you have that you think would be helpful for the EQC Agency Oversight Subcommittee?

21. Who else do you think is important for us to speak with to better understand this project? [Remind who you have already spoken with if necessary.]

Thank you for participating in our study. Would you like us to send you a final copy of our report to the EQC Agency Oversight Committee [add other comments as appropriate]?

Summary Reports of Student Research Reports for Montana Environmental Quality Council (EQC) House Joint Resolution (HJR) 34 Interim Study*

Respectfully submitted to:
EQC Agency Oversight Subcommittee
May 18, 2006

Prepared in conjunction with:
Community Responses to Toxic Contamination (EVST 594.03)
Instructor: Dr. Robin Saha
University of Montana

* An executive summary for Burlington Northern Livingston (BNLV) is not available at this time.

The Bozeman Solvent Site (BSS):
A consideration of the History, Successes, and Delays

By Jamie Silberberger and Molly McKinley

This study was carried out under the directive of House Joint Resolution 34 and in conjunction with an interim study of the Environmental Quality Council (EQC) Agency Oversight Subcommittee. We set out to determine the factors contributing to delay and success regarding implementation of the Montana Comprehensive Environmental Cleanup and Responsibility Act (CECRA) at the Bozeman Solvent Site (BSS).

In 1989, perchloroethene or "Perc" was discovered in drinking wells north of Main Street between 15th and 19th streets in Bozeman, Montana. In 1994 the site was listed under the Montana Superfund process (CECRA) and then designated a "maximum priority site." Seventeen years later cleanup has not been finalized. From our preliminary research, we developed a list of specific objectives to guide our research into factors that may have contributed to delays. These objectives include:

1) Determining if and how multiple Potentially Liable Parties (PLPs), the city of Bozeman and the Jewel Corporation/American Stores, and litigation may have stalled the process.
2) Determining whether having numerous consultants contributed to delay.
3) Determining if project manager turnover contributed to delay at the site.
4) Determining whether lack of funding prevented timely completion of work.
5) Determining whether the CECRA process inhibited timely cleanup.
6) Determining whether communication was effective among the various stakeholders, and whether ineffective communication contributed to delay.

We supplemented our preliminary research with 9 interviews with consultants, DEQ project managers, impacted residents, a former city official, the city attorney, and the BSS Citizens' Committee's technical advisor. We used interview questions provided by the EQC and ones we developed in accordance with our site specific objectives. The interviews were conducted in April 2006.

We found that though important steps were taken early on to protect human health, the site has been plagued by delays that have prevented timely remediation. Within the DEQ, there have been a number of factors that have stalled momentum at the site: staff turnover, lack of funding, and slow document review. Slow document review has emerged as a major issue. In some cases documents took up to six years to approve. This can be partially attributed to having five different project managers over 17 years. Each new project manager required time to get up to speed on the technicalities of the site and the CECRA process – their "learning curve." Lack of funding prevented the DEQ from completing the Risk Assessment (RA). For a time, the RA assessment was put off until the PLPs volunteered fund the completion of an RA.

Initially the two main PLPs had their own consultants working on the site. As a result, there was a great deal of duplication because each consultant submitted technical reports to the DEQ. The DEQ had to review each report before deciding which one to approve. What we refer to as "dueling consultants" used up valuable time and DEQ resources.

The identification of two main PLPs and the litigation that ensued did not help remediation efforts at the site. Early on in the process, litigation prevented cooperation among PLPs and led to communication breakdowns. As a result, communication between the PLPs' consultants was ineffective and the city of Bozeman was reticent to talk to community members about their concerns because they worried about liability issues.

Finally, the many different steps required under CECRA can at times bog down the process. Although many of these steps cannot be avoided, slow document review time can prevent the process from proceeding. Given that the threat to human health was averted early on, there is the question of whether or not BSS should continue under CECRA. Currently, a site is locked into the CECRA process until all steps have been completed.

We conclude that the project officer learning curve, litigation, multiple PLPs, dueling consultants, agency personnel turnover, funding, communication, and the CECRA process are all factors that contributed to delay. What follows is a list of our recommendations to improve the Montana Superfund process.

- Efforts should be taking by DEQ, PLPs, and community representatives to keep open and productive lines of communication. That can speed up the learning curve of new staff. Litigation inhibits communication between parties.
- Documents need to be reviewed in a timely manner. DEQ should set deadlines for itself for document review.
- Although having multiple PLPs is unavoidable at times, if sufficient funding were available, DEQ could complete work itself (through contractors) and recover costs later.
- More funding should be appropriated to the DEQ in order to increase project manager's salaries and retain quality personnel. Furthermore, the DEQ needs to have enough funding to complete the tasks required of them as a regulatory agency (for example, completing the risk assessment).
- CECRA sites should be evaluated on a periodic basis to determine whether or not they should remain in the program. If a site could be removed from the CECRA process once the human health risks have been eliminated, this would result in fewer hoops to jump through and could lead to more timely final cleanup actions.

We realize the issues involved in a Superfund cleanup are complex and multifaceted. Our findings and recommendations certainly are not the definitive answers to all of the problems associated with the Superfund process. Nevertheless, we hope to encourage discourse about ways the process can be improved.

Schedule and Communication Challenges at the Brewery Flats Lewistown Facility

By John Meyer

The purpose of this research is to inform the Montana State Legislature about the nature of certain schedule and communication problems at the Brewery Flats Lewistown Facility. Recommendations are provided regarding possible legislative changes that may circumvent future problems with the Voluntary Cleanup and Redevelopment Act (VCRA) program.

The Brewery Flats site is located within Fergus County just outside of Lewistown, Montana. The site is situated along the west bank of Big Spring Creek, one mile south of Lewistown on Route 238 and covers approximately 58 acres. Several residences are located to the west of the site. The Brewery Flats site is a former Milwaukee railroad switching yard and roundhouse. Operations included the fueling and servicing of engines and general site maintenance resulting in soil contamination with petroleum hydrocarbons, arsenic, and lead. The site has also been home to an oil refinery, coal mine, feed lot, a brewery, and functioned a dump for garbage, old appliances, vehicles, etc. A cleanup has been conducted under the VCRA program.

The cleanup received broad community and agency support throughout the duration of the project. While most everyone involved at the site widely perceives the final outcome to be a success, many noted what they believe were potentially avoidable delays along the way. In the most general sense, many of these delays can be attributed to problems with scheduling and communication. The perceived merits of these delays vary with stakeholder. Some community members expressed frustration with an apparent lack of a concrete schedule, while the DEQ was of the opinion that the schedule changed with changing local visions regarding future use of the site. There was general agreement that grant funding application schedules resulted in a vicious “hurry up and wait” cycle for the city of Lewiston.

Delays were also perceived to result from less than optimal conditions involving communication among the stakeholders. Document review was seen as posing certain communication challenges for the consultant, while some in the community did not feel that the consultant did a good job communicating technical information. Specific ideas generated from this research for improving the timeliness and communication of this project and possibly other similar projects are as follows:

1. Create and adhere to a scheduled timeline that is specific, achievable, and measurable.

2. Evaluate the ability of the DNRC Reclamation and Development grant program to support Voluntary Cleanup Plan (VCP) schedules, and if necessary devise means to expedite allocation of these grant monies. Identify or develop other funding mechanisms that better support timely clean ups.

3. Allow various stakeholders to electronically edit necessary documents via tools such as *Track Changes*.
4. Encourage or allow DEQ to determine on site-by-site basis any requirements or information under VCRA that may be superfluous and thus eliminated.

S&W Sawmill: DEQ's Orphan Project

By Daisy Patterson and Taira Flute

The S&W Sawmill site in Darby is unique in the lack of perceived risk and, perhaps consequently, the lack of controversy. S&W Sawmill's ability to remain contaminated with little outrage from the community has facilitated the Department of Environmental Quality's virtual abandonment of the project as evidenced by the longstanding lack of a project officer. Frustrations exist over communication between DEQ and the Ravalli County Health Department, and between DEQ and at least one property owner adjacent to the site. When comparing S&W Sawmill to other sites, it is ironic that the driving force behind progress in Darby is not the DEQ or a citizen group; it is the lead potentially liable party.

Research goals include an assessment of the community response to contamination and specific contributors to delay at S&W Sawmill. Research objectives are as follows: to determine why there appears to be a lack of a community response; to determine how much the community is aware of the contamination; and determine specific, procedural delays the DEQ has faced as they oversee the remediation efforts.

We found that the community does not appear to perceive a grave risk from the contamination at S&W Sawmill. There is a general lack of awareness of the site in Darby. Community members are not overly concerned with the contamination, yet they are unsure whether they should be concerned with well water contamination levels that are within the state drinking water standard for dioxin yet above the federal standard. Although there was general satisfaction with the CALA process, there was also general frustration about DEQ funding and the lack of project officer.

The following recommendations include policy and program suggestions to address frustration with the process, communication problems, and lack of community involvement:

1. Create an electronic clearinghouse to provide information to local agencies, PLP's, community members, and anyone wishing to get information on the status of Superfund sites in Montana.

2. Create a local Water Quality District similar to those in several Montana cities, which have provided leadership in water quality protection.

3. Post more informative signs at the site in more visible and trafficked locations.

4. Create a system to facilitate site progress during the absence of a project officer.

The PLP who is willing to complete work is unduly impeded by the lack of project officer to review documents. Whether or not funding is found to hire more DEQ staff, the current position apparently has funding and is not filled. PLP's need the assurance that procedures can be developed to trigger action on sites that have been inactive for a certain period of time.

Lockwood Solvent Groundwater Plume Site: Lessons Learned on Communication, Delay, and Social Impacts

By Michele Reinhart and Merianne Stansbury

The Lockwood Solvent Groundwater Plume Site (LSGPS) is a contiguous 580-acre federal Superfund Site just outside of Billings, Montana. Groundwater benzene contamination was discovered at the site in 1986 and the LSGPS was listed on the National Priorities List (NPL) on December 1, 2000. The primary contaminants of concern are volatile organic compounds (VOC), tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene (DCE or cis-1,2-DCE) and vinyl chloride (VC). The EPA identified two Potentially Responsible Parties (PRP's) in 2000: Beall Trailers, Inc. (Beall) and Brenntag West Inc. (Brenntag), formerly HCI Dyce Chemical, Inc.

Our primary objectives are to understand obstacles to successful cleanup of contaminated sites and to identify ways the Superfund process can be improved. Particular areas of concern are communication among involved parties and delays in the process. These broad objectives and areas of concern were developed from House Joint Resolution 34 and through coordination with the Environmental Quality Council (EQC) Agency Oversight Subcommittee.

Specific objectives regarding communication are: (1) to understand the effectiveness of communication at the Lockwood site; and (2) to understand what factors facilitated or impeded communication among the various stakeholders.

Specific objectives regarding delays are: (1) to understand why delay occurred in two stages of the process: (a) discovery of contamination and NPL listing, and (b) identification of contamination and implementation of the public water system; and (2) to understand stakeholder perceptions of the timeliness of cleanup.

Our research was conducted during March and April 2006. We employed several research methods to obtain information on the Lockwood site. We conducted preliminary document analysis and reviewed the Agency Oversight Subcommittee panel discussion. We also examined agency documents, including the Record of Decision (ROD), Proposed Plan, and the Remedial Investigation (RI) Executive Summary. We used interviews as our primary research method to supplement our analysis of documents relating to the Lockwood site. The EQC supplied the class with a set of interview questions, which we added to. Using the site contact list provided by the DEQ, we interviewed 8 people for this report.

The main conclusions and recommendations from our findings are:

1. FUNDING. Create State **Superfund** so DEQ can initiate cleanup actions before PLP's are identified. Just get the site clean. It took to long to identify and publicly name responsible parties – this was a problem with the law.

2. FLEXIBLE CECRA AND COLLABORATION. Create a more flexible CECRA process that allows for actual collaboration by encouraging stakeholders to come to the table together. Revise the law or administrative rules to allow and encourage negotiation on cleanup decisions that directly involves top decision makers. Collaboration with the various stakeholders and decision makers could lead to a more effective and efficient cleanup process. Joint fact finding on the scientific data also could be used to come to consensus on interpreting the data and help the agency more efficiently make cleanup decisions.

3. PUBLIC HEALTH COMMUNICATION. To better handle community health concerns, train agency personnel or contract out services in risk communication. Special expertise is required to contend effectively with extreme community reactions, such as strong emotions that are commonly and justifiably associated with actual or potential chemical exposures. Too often communities end up distrustful of government's technical and legal explanation of what is "safe." This has lasting communication implications. Thus, the DEQ needs someone who will be frank, honest, yet compassionate in helping the community address public health concerns.

4. EARLIER INVESTIGATION. In Lockwood, insufficient studies of the contamination failed to reveal the extent of the existing problem back when contamination was discovered in 1986 with the pipeline leak. The contamination of groundwater was found in Lockwood in 1991, but residential well contamination above standards was not discovered until 1998. Further investigation of the extent of the contamination could have been done starting in 1986, if there had been sufficient funding and agency will power to do so. Contamination may have been better contained and risks avoided..

5. SUCCESS. According to all parties interviewed, getting people hooked up to public water supply as quickly as possible was a success and helped reduce exposure. In such cases, the agency should act quickly as was done, once the threat was known, to remove the health risk.

6. PROJECT MANAGEMENT. Catherine LeCours has been an talented and effective project manager. She has done her best to keep the involved parties in the loop with open and regular communication. Her consistent assignment to the Lockwood Solvent Site since 1998 has helped keep the cleanup process moving. Increasing pay for DEQ project officers can help retain competent, experienced staff like Ms. LeCours.

Schedule and Communication Challenges at the Brewery Flats Lewistown Facility

By Steve Ackerlund and John Meyer

The purpose of this research is to inform the Montana State legislature about the nature of certain schedule and communication problems that have occurred at the Upper Tenmile Creek Superfund site. Recommendations are provided regarding possible legislative changes that may assist in circumventing future problems.

The community of Rimini is located within the Upper Tenmile Watershed and is approximately fifteen miles southwest of Helena, Montana. Once known as the Rimini Mining District, the area consists of about 150 abandoned and inactive hard rock mine sites that produced gold, lead, zinc, and copper. Consequently, investigations have identified wide-spread metals contamination in surface water, groundwater, sediment and residential soils. As a result of contamination, the area was placed on the Environmental Protection Agency's Superfund National Priority List in the fall of 1999.

The project received broad community and agency support up through the Record of Decision (ROD) in 2002. There continues to be little expressed concern about ongoing work to remediate historic mining impacts in areas of the watershed that are more distant from the community.

Controversy began when work was initiated in the Landmark subdivision and continues with the work being performed in Rimini. In the most general sense, the controversies seem related to deviations from plans prescribed by the ROD. The perceived merits of these deviations are dependent upon the unique perspectives of the different project stakeholders; the EPA and DEQ generally justify their deviations while many affected stakeholders question these justifications.

Specific ideas generated from our research for improving the timeliness of this project and possibly other Superfund projects are as follows:

- The agencies should be more tightly constrained to implementing the ROD. Deviations from prior plans or prior decisions increase the likelihood of confronting unforeseen technical or social issues that can cause delay and project cost increases.

- DEQ staff turnover on projects should be minimized to improve communication and coordination between DEQ and EPA, and within DEQ. Turnover may increase the chance of changing previously agreed to plans, such as the ROD.

- Uncertainty of annual appropriations and the lack of transparency concerning what influences the budget and the status of the present EPA Superfund budget has led to heightened concerns and the need to delay project elements into the next federal fiscal year.

Even with changes in these areas, however, it is unlikely that the schedule and cost of a project of the magnitude of the Upper Tenmile Watershed could be radically transformed through the near-term efforts of the Montana legislature. It is in fact, a costly multi-year effort. The protracted nature of the project has led to social strains that typify many communities that become involved in a Superfund cleanup. These strains result from project-related inconveniences and nuisances, potential impacts to personal property values, real or perceived impacts to private property rights, reduced trust in government, and overall frustration, concern and anxiety of a prolonged nature.

The needs commonly expressed by both community members and agency personnel as under recognized and undervalued at the outset of the project include:

- Strong community leadership that can organize the community, make hard decisions, and that can effectively advocate the community's position within the community and within the larger political systems that support the project.

- Improved public participation that helps community residents resolve differences, encourages active participation, and that can meaningfully influence the project.

- Improved communication between the various stakeholders.

- A public relations program that serves to educate a broader public about the nature of the environmental problems and the benefits of the work performed.

A comprehensive facilitation program, such as Joint Fact Finding, is suggested as an alternative to the TAG program and to the ongoing types of community involvement presently being used to support the project. Facilitation approaches such as Joint Fact Finding go beyond meeting management to establish public participation and policy dialog processes that are informed, inclusive and deliberative. By adopting a comprehensive facilitation program, the Montana legislature would actively recognize Superfund projects as being socially as well as technically complex, and would be applying the state-of-the-art processes for responding to the social challenges.